

Heavy Tactical Vehicle (HTV) Heavy Dump Truck (HDT)
Industry Day Questions and Answers

1. Will the Heavy Dump Truck (HDT) receive a waiver to exceed the current road width standard of 96" and does this apply OCONUS as well?

Answer: No, the HDT will not receive a waiver to operate with a vehicle width exceeding 96 inches on CONUS and OCONUS road systems. ATPD 2375, Paragraph 3.5.2 provides the following requirement: "Overall vehicle width shall comply with DOT 658.15, Width and DOT 658.16."

DOT 658.15: (a) No State shall impose a width limitation of more or less than 102 inches, or its approximate international metric equivalent, 2.6 meters (102.36 inches) on a vehicle operating on the National Network, except for the State of Hawaii, which is allowed to keep the State's 108-inch width maximum by virtue of section 416(a) of the Surface Transportation Assistance Act (STAA).

DOT 658.16: (a) Vehicle components not excluded by law or regulation shall be included in the measurement of the length and width of commercial motor vehicles. (b) The following shall be excluded from either the measured length or width of commercial motor vehicles, as applicable:

(1) Rear view mirrors, turn signals, required clearance lamps, handholds for cab entry/egress, splash and spray suppressant devices, load induced tire bulge, and safety devices.

In accordance with FEDERAL SIZE REGULATIONS FOR COMMERCIAL MOTOR VEHICLES, the Federal Government first enacted size regulations for Commercial Motor Vehicles (CMVs) with the passage of the Federal-Aid Highway Act of 1956. This Act provided a maximum vehicle *width* of 96 inches (2.44 meters) on the Interstate highway system. Subsequently, the Federal-Aid Highway Act of 1976 increased the allowable width for buses to 102 inches (2.6 meters). The Surface Transportation Assistance Act (STAA) of 1982 extended the same width requirement of 102 inches to commercial trucks. At the same time, the STAA expanded the highway network on which the Federal width provision applied from the Interstate to the National Network (NN) of highways.

The maximum width limit for CMVs on the NN and reasonable access routes of states was originally established at 102 inches, except for Hawaii where it is 2.74 m (108 inches). (See discussion of Reasonable Access on page 12.) To standardize vehicle width on an international basis, the 102-inch width limit was interpreted to mean the same as its approximate metric equivalent, 2.6 meters (102.36 inches).

To date, 8 remaining states out of 50 states do not allow commercial motor vehicles exceeding 96 inches in width to operate on their local roads outside those of the Interstate and National Network of highways.

2. Is an all wheel drive HDT acceptable in place of a front drive and rear drive HDT as specified in the Army Technical Purchase Description (ATPD)?

Answer: No, to specify all-wheel drive implies that all drive axles and wheels on the vehicle are always fully engaged and continuously providing traction/drive. This is neither the case nor necessary for the HDT mission requirements. The ATPD 2375 specifies an inter-axle differential lock/unlock control that controls the engagement and disengagement of the front wheel drive by the operator on demand and when necessary. This type of control when activated transitions the vehicle from all-wheel drive to rear drive only, through disengagement of the front drive axle to a non driving axle. There are numerous HDT scenarios (i.e., traveling emptied) where all-wheel drive/traction is neither necessary nor desired.

3. What is the relevance of the Gross Vehicle Weight Rating (GVWR) with the 10% add on?

Answer: Not specifying an actual maximum value for GVWR is less restrictive and allows the truck manufacturer to interpret the ATPD requirements, take advantage of new technologies and manufacturing processes/practices, and design the HDT accordingly. The 10 percent add on requirement is a safety margin that allows future growth of the HDT.

4. What is the armor strategy for the HDT?

Answer It is permissible for offerors to propose either an A-cab/B-kit armor package solution or a fully dressed replaceable armor cab package solution, to include underbody blast protection. ATPD 2375, Paragraph 3.9 and related paragraphs will be revised accordingly. The HDT armor protection level remains the same.

5. What are the changes to the dump body requirements (temperature requirements)?

Answer: The ATPD 2375, Paragraph 3.8.3.1 Heated Dump Floor and Sides, is revised as follows: The M917A3 shall be furnished with a heated dump floor and sides system. The system shall be capable of maintaining a dump body temperature range of 300 to 375 degrees F at highway speeds and 25 degree F ambient temperature when loaded with material (e.g., hot mix asphalt and similar). The system shall include an inside cab manual shut off, in-cab temperature gauges

for measuring the temperature of the heated dump bed system and the dump bed material (e.g., hot mix asphalt and similar via a heavy duty thermo coupler or similar), and shall be operated and monitored from the driver's position (T). The in-cab manual shut off shall permit the operator to engage (e.g., electrical switch for controlling an air cylinder or a manually operated lever with cable) the exhaust duct shut-off valve or some other method the OEM uses to heat the dump body and dump sides. To prevent dump body overheating the system shall have an automatic shut off when body temperature reaches 375 degrees F. The heated dump floor and sides shall be similarly capable of manual shut off from outside the cab at the rear of the vehicle. One permissible method shall be for the operator to have the option to run exhaust through the body or out the engine exhaust stack.

6. Are the sides of the dump body required to be heated as well or just the bottom?

Answer: Yes both are specified and required - see the answer to question 5 above.

7. Will the ground clearance requirement of the front and rear of the HDT be changing?

Answer: At this time the answer is no. ATPD 2375, Paragraph 3.4.6.2 Overall Clearances, is revised as follows: "The M917A3 angle of approach and departure shall be no less than 15 degrees. The M917A3 in armor protection package configuration shall have a minimum ground clearance of 12.0 inches at the lowest point of the vehicle (e.g., axle differential housing) while maintaining overall safe handling, braking and stability. The M917A3 design shall allow no more than a 20 percent reduction in the specified 12.0 inches ground clearance with the M917A3 at GVWR, as measured from the lowest point of the vehicle on flat level ground. The M917A3 design shall deliver high tractive efficiency and shall impart an overall low ground pressure at GVWR to minimize mobility degradation during off-road operations in soft soils, mud and snow."

8. Please clarify the battery charging system requirements in relation to the type of battery being used.

Answer: ATPD 2375 requires that the HDT be production furnished with the Army 6TAGM Absorbent Glass Mat (AGM) (or commercial equivalent) maintenance-free batteries. IAW battery manufacturers guidance, to maintain optimal high AGM battery performance and battery charging, and prevent overcharge of these types of batteries, ATPD 2375 specifies that the battery charging system include a load sensing capability and temperature-compensated voltage regulation.

9. What is the basis of the requirement to have tow hooks/lift capabilities that can handle the full weight of the HDT with a full payload?

Answer: ATPD 2375, Paragraph 3.4.6.8 Lifting and Tiedown Provisions, is revised as follows: "MIL-STD-209 (latest Rev) shall be followed regarding the design of lift and tiedown provisions for the M917A3 system. The lifting and tiedown provisions on the M917A3 vehicle (to include with and without installed armor protection package), minus the pintle-towed load, shall be designed and shall meet the criteria of MIL-STD-209. When the armor package is installed on the M917A3 vehicle, the lifting and tiedown provisions, including all connecting structural members shall meet the criteria of MIL-STD-209. The contractor shall certify that the lifting and tiedown provisions and all related structural components (including bumpers, if used) meet this military standard and provide calculations to prove the design strengths. The locations of the equipment tiedowns shall permit the vehicle to be secured to the transport medium in such a manner to prevent vehicle shifting and movement in any direction. Lifting and Tiedown provisions shall not serve as towing eyes and shall be permanently marked and shall not interfere with the payload of the vehicle (T). The M917A3 lifting and tiedown provisions will be tested and evaluated with and without the armor protection package installed (T).

10. Will SAE J1939 and J1587 be allowed in place of ISO 9141 for the Vehicle Computing System and Test Measurement and Diagnostic Equipment requirements?

Answer: Yes SAE J1939 and SAE J1587 can be used in place of ISO 9141. SAE J1939 and SAE J1587 will be retained in ATPD 2375 for all Test Measurement and Diagnostic Equipment (TMDE) requirements. Responses to similar concerns and inquiries for TMDE requirements were previously responded to and are posted at PROCNET. The reference to ISO 9141 will be removed from ATPD 2375.

11. Are drive cameras, blind spot monitoring and autonomous requirements going to be added to the ATPD?

Answer: At this time the answer is no. There is the possibility that revisions to ATPD 2375 will be necessary to add requirements for space claims, power provisions, sensors and interfaces to accommodate future installation of autonomous devices for steering, drive cameras, etc.

12. What is the basis for the 65 MPH speed requirement?

Answer: The 65 MPH is an ATPD 2375 performance requirement (T=O) derived from the USER operational requirement (CPD Attribute) which will allow the HDT vehicle to operate on civilian roads at legal speeds. The objective is to decrease

haul time and increase the efficiency of hauling/dumping operations. This requirement is currently under review, however.

13. Would the Government be open to a cab swap option for those HDTs requiring armor?

Answer: Yes, see the response to question 4 above.

14. What is causing the delay in program schedule?

Answer: Various program delays have led to a change in the schedule. Please refer to the Industry Day slide deck posted to Procnnet for the most current HDT schedule.

15. Has the requirement of the 120% load requirement on the axel been removed?

Answer: Yes, the 120% is reduced to 110%.

16. When is the A-cab testing being validated?

Answer: Performance and blast validation of the M917A3 armor package will be initially conducted at PPT. Further evaluation of the armor protection package installed will be conducted throughout Army test and evaluations of the M917A3 (HDT) (e.g., PPT, PVT and Live Fire).

17. Will the requirement change that requires delivery of prototypes 10 months after contract award?

Answer: Yes, the production like representative article development preceding PPT has been extended to 16 months.

18. How much funding does the Government envision for each contractor in phase one?

Answer: The Government intends to fund the purchase of each OEM's prototypes as well as the testing efforts required during PPT.

19. What type of contract does the Government envision awarding for production, an IDIQ?

Answer: It is likely the Government will pursue a Fixed Price, IDIQ contract type.

20. Has the Government given thought to rollover protection since these vehicles have a higher propensity for rollover?

Answer: There are any numbers of solutions for rollover protection that can and cannot be applied to the HDT. ATPD 2375 requires electronic Roll Stability Control (RSC) that mitigates the potential for rollover events, with and without armor installed.

21. Will the vehicle turning radius (clearance circle) be revised?

Answer: ATPD 2375, Paragraph 3.6.5.1 Vehicle Clearance Circle is revised as follows: The vehicle clearance circle shall not exceed 6 times the vehicle wheelbase when measured per SAE J695. It is desirable that the turning diameter not exceed 110 feet (curb to curb).

22. Please clarify the number of wheels that are required per axle.

Answer: ATPD 2375, Paragraph 3.7.10.2 Rear Drive Axles and Suspension, is revised as follows: "The M917A3 vehicle shall be equipped with two or more rear drive axles and suspension systems with components having a rated capacity at least equal to the maximum load that can be imposed on each member. The rear axles on the vehicle shall be complete assemblies and shall include single or dual wheels at each axle end. Each axle shall be complete with suspension, interaxle differential with lock-up and all other necessary components and parts. The rear axles' weight rating (RAWR) shall also accommodate the weight of the armor protection package without overloading the rear axles and suspension at maximum payloads. A single non-drive drop/tag/pusher/dead lift axle is permissible for use in only managing vehicle weight distribution and shall not contribute to, nor be counted into the HDT GVWR."

23. Are there any variances allowed in the tire requirement?

Answer: No, the tires for the HDT are required to achieve a 20k mile tread life.

24. Will there be a requirement for a collision warning system (CWS) option?

Answer: There is no CWS option. The ATPD 2375 has always specified the following CWS requirement: "Paragraph 3.5.1.1.3 Collision Warning System (CWS). The M917A3 shall be furnished with a Collision Warning System. The

M917A3 vehicle shall provide cables and electrical cabling pass-throughs to the vehicle exterior with and without the armor protection package installed, as required, for the CWS outside sensors mounted to the vehicle. The CWS shall provide the operator/driver a visual/audible indication when objects are approaching too close to the front and sides of the M917A3 vehicle (T) and pintle towed trailer (O). The warnings shall be such to allow sufficient time to avoid impending frontal and side collisions. The CWS central processing unit shall be able to compute closing speeds from 1 to 100 mph (minimum). The front antenna transmitter/receiver shall have a detection range of 1 to 500 feet (minimum). The sensor detection beam shall be capable of side-to-side detection covering no less than 70 degrees. The antenna transmitter and receiver assembly shall be located and mounted on the M917A3 to preclude any damage when coming close to other vehicles and protected from damage from terrain or natural obstacles and inadvertent human contact. The warning lights shall be disabled when the M917A3 vehicle is switched to the blackout mode; however, momentary flash of the warning lights during engine start and stop is permissible. The audio alarm shall remain operable during blackout. On/off switch on the display unit for the forward and side sensors shall be provided. The performance of the CWS shall not be degraded during inclement and obscure conditions (e.g. dark, rain, snow, fog, dust, smoke)."

25. Will there be ATPD 2375 requirements for drive by wire/autonomous capabilities?

Answer: Please refer to Question 11 above.